GSI RNAAC Technical Report 2001

A. Yamagiwa

Geodetic Observation Center
Geographical Survey Institute, Japan

Introduction and Overview

Since 1996, Geographical Survey Institute (GSI) has been contributing as a Regional Network Associate Analysis Center (RNAAC). The network for the GSI's analysis consists of 10 IGS global sites (Figure 1a) and 7 domestic GPS sites (Figure 1b).

Outline of Processing

Coordinates and covariance are generated in daily basis using GAMIT version 9.95 and they are combined with GLOBK version 5.04 to generate weekly solutions with loose constraint.

The specification of the analysis is as follows;

Final IGS orbits and Earth orientation parameters are applied.
Measurement elevation cut-off angle of 20 degrees

Data rate of 30 secs for single-day adjustments.

Tropospheric zenith delays are estimated every 3 hours.
Station coordinates estimated, applying a priori sigma of ~10m.

The data rate used for the analysis was changed from 60 secs to 30 secs from GPS week 1108 (April 1 2001).

Current State

The standard deviation of GSI RNAAC weekly solution is shown in Figure 2. A sharp fall of SD around the week 1108 seems to reflect the above-mentioned change in data rate.

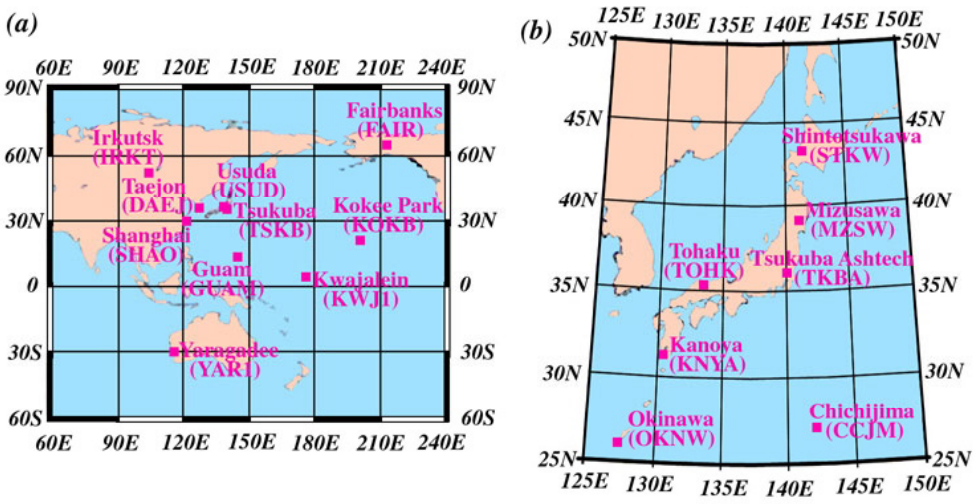

Figure 1. GPS observation sites for GSI RNAAC analysis
(a) IGS global sites (b) domestic sites

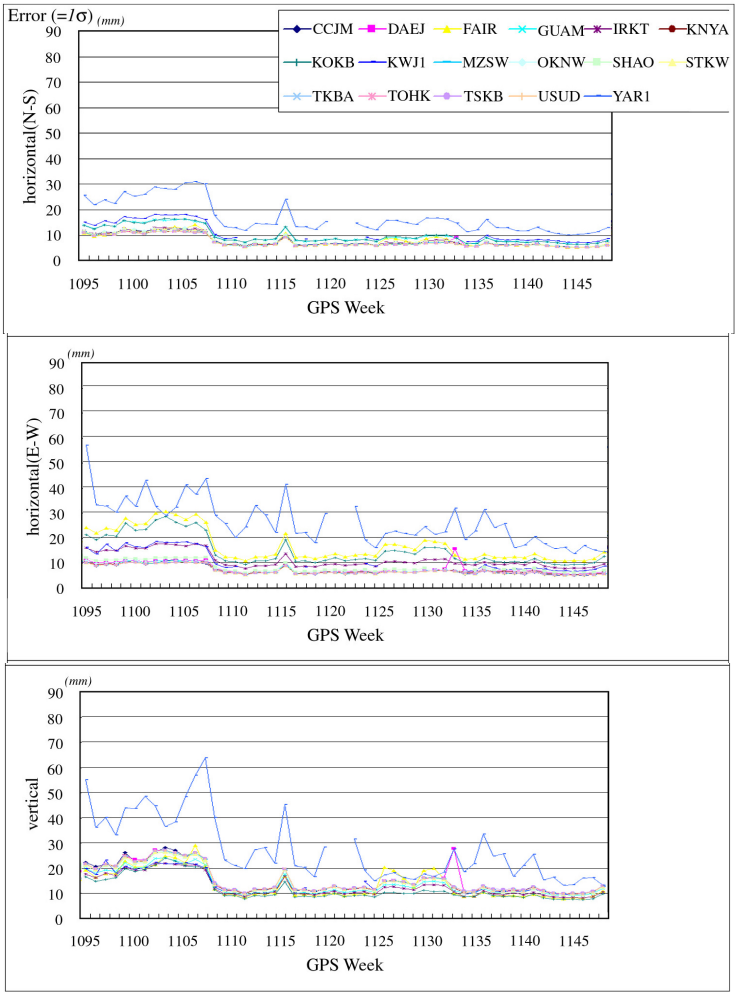

Figure 2. Standard Deviation of GSI RNAAC weekly solution